

### **REMARKS**

Claims 1-27 are present in the application. In view of the remarks that follow, Applicants respectfully request reconsideration.

#### **Compliance With 35 U.S.C. §112, Second Paragraph**

The Office Action rejects Claims 1-8 under the second paragraph of 35 U.S.C. §112 as indefinite. In particular, the Office Action cites MPEP §2172.01, and asserts that independent Claim 1 omits an essential step, which is a "step for cleaning lens". This rejection is respectfully traversed, for the following reasons.

First, the rejection cites MPEP §2172.01, but is not consistent with the provisions of MPEP §2172.01. In particular, §2172.01 specifies that if a claim omits essential matter, then the claim may be rejected under the first paragraph of 35 U.S.C. §112 as non-enabling. In addition, §2172.01 specifies that, if a claim recites essential elements but fails to interrelate them, then the claim may be rejected under the second paragraph of §112 as indefinite. However, the present rejection is not consistent with either of these potential grounds of rejection. The most recent prior Office Action (mailed November 15, 2006) set forth the same ground of rejection, with these same problems. Applicants' most recent Response (filed April 13, 2007) pointed out these problems in the prior rejection, but the present Office Action does not attempt to cure these problems.

Second, Claim 1 is an originally-filed claim, and the originally-filed claims are by definition a part of the specification. (See MPEP §608.01(a), and the second paragraph of 35 U.S.C. §112). Consequently, it cannot be said that Claim 1 omits a step that the specification teaches is essential, because Claim 1 is a portion of the specification, and makes it clear there is at least one form of the invention in which a separate cleaning step is not essential. Moreover, other portions of the present specification clearly teach that the recited surfactant can have a beneficial cleaning effect even during a light-exposing operation. For example, see paragraph [0013].

Third, as noted above, the Office Action asserts that Claim 1 omits a step, in particular "the step for cleaning lens". However, Claim 1 expressly recites "an objective lens immersed in a first fluid containing surfactant". It is respectfully submitted that, since Claim 1 recites a lens and also recites that the lens is immersed in a "fluid containing surfactant", the fluid with surfactant inherently cleans the lens with which it is in contact.

For the foregoing reasons, it is respectfully submitted that the §112 rejection is inherently defective, and that in any event Claim 1 is not missing any essential step. Claims 1-8 are believed to be in compliance with §112, and notice to that effect is respectfully requested.

#### Double Patenting Rejections

The Office Action rejects many of the claims for obviousness-type double-patenting, based on two co-pending applications (U.S. Serial No. 11/251,330 filed October 14, 2005, and U.S. Serial No. 11/384,624 filed March 20, 2006). These grounds of rejection are each respectfully traversed, because they have several fundamental defects that are discussed separately below.

A first defect is that the double-patenting rejection based on the '624 application makes a relatively vague assertion that a group of claims in the present application recite effectively the same invention as a group of claims in the '624 application. But in order to be proper, the double patenting rejection must set forth a one-to-one correspondence between each pending claim of the present application and a respective one of the claims of the co-pending application. For example, the rejection would need to specify that Claim A of the present application is obvious from Claim X of the co-pending application, Claim B of the application is obvious from Claim Y of the co-pending application, Claim C of the application is obvious from Claim Z, and so forth. The Office Action fails to do this. This same defect was present in essentially the same double-patenting rejection as previously presented in the most recent prior Office Action, and Applicants' last Response pointed out this defect. However, the present Office Action does not attempt to cure this defect.

A second defect relates to the fact that, as to each of the double patenting rejections, the present Office Action admits that Applicants' claims are not identical to the claims in the co-pending application, and then essentially makes a conclusory assertion that the subject matter in Applicants' claims would be obvious in view of the claims in the co-pending application. However, in any obviousness analysis, the Examiner is required to specifically identify for each rejected claim: (A) the differences between the rejected claim and the corresponding claim of the co-pending application, (B) the modification needed in the subject matter of the claim from the co-pending application in order to arrive at the subject matter of the rejected claim, and (C) a statement of a reason why a person of ordinary skill in the art would have been motivated to make the proposed modification. This same problem was present in essentially the same double-patenting rejection as presented in the most recent prior Office Action, and Applicants' last Response pointed out this problem. However, the present Office Action does not attempt to cure this problem.

Still another consideration is that each of the double-patenting rejections is indicated to be a provisional double-patenting rejection, due to the fact that neither of the co-pending applications has actually issued as a patent. On the one hand, it is permissible for the Examiner to identify a rejection as "provisional" where the rejection is based on another application. On the other hand, it is also important to understand that, unless and until the other application issues as a patent, there is no actual risk of a double-patenting situation, and thus no reason for Applicants to take any corrective action here, such as amending claims or submitting a terminal disclaimer. Moreover, for reasons discussed in other portions of these remarks, it is believed that all other grounds of rejection in the present Office Action are without merit, such that the provisional double patenting rejections are the only remaining rejections in this application. MPEP §804(I)(B) specifies that, where a provisional double patenting rejection is the only remaining rejection in an application, the Examiner should withdraw the provisional rejection, permit a patent to issue from that application, and then apply a double patenting rejection in the other pending application. Accordingly, Applicants believe that, pursuant to MPEP §804(I)(B),

the Examiner should withdraw the double-patenting rejection in this application, and issue a notice of allowance.

In view of the various different reasons discussed above, it is respectfully submitted that the double patenting rejections each have defects. It is therefore respectfully submitted that the double patenting rejections should be withdrawn.

#### Rejections Based on Hazelton and Van Slyke

Claims 1-27 stand rejected under 35 U.S.C. §103 as obvious in view of a proposed combination of teachings from Hazelton U.S. Patent Application Publication No. 2006/0023185 and Van Slyke U.S. Patent No. 5,788,781. This ground of rejection is respectfully traversed, for the following reasons.

#### HAZELTON HAS NOT BEEN SHOWN TO BE PRIOR ART

The §103 rejection based on Hazelton fails to properly establish that Hazelton is prior art with respect to the present application. More specifically, the Hazelton patent issued from an application filed on September 29, 2005, but this filing date is after the March 16, 2004 filing date of the present application. Hazelton claims the priority of a PCT application filed on April 2, 2004, but this PCT filing date is also after the March 16, 2004 filing date of the present application. Through the PCT application, Hazelton claims the priority of two U.S. provisional applications, which are U.S. Serial Nos. 60/462,556 and 60/482,913, respectively filed on April 11, 2003 and June 27, 2003. These two provisional applications each have filing dates before the filing date of the present application. However, that does not mean the Hazelton patent is automatically entitled to the benefit of the filing date of either provisional application in regard to the particular teachings for which Hazelton is cited.

First, in order to be applied under §103, Hazelton must qualify as prior art under a subsection of §102. Apparently, the Examiner is relying on §102(e). The Examiner has the burden of showing that Hazelton is in fact prior art with respect to the present application, and

this includes carrying the burden of showing that, under §102(e), Hazelton is entitled to the priority of the filing date of at least one of the two provisional applications. In this regard, the Examiner will need to show that various requirements have been met. For example, as to the PCT application, the Examiner will need to demonstrate that it designated the United States, and that it was in fact published by WIPO. As another example, in regard to the two provisional applications, the Examiner will need to demonstrate that the PCT application properly claimed the priority of each provisional application. The §103 rejection in the present Office Action fails to do any of this. Stated differently, the present Office Action establishes only that Hazelton is entitled to the benefit of its own U.S. filing date of September 29, 2005, but that is not enough to make Hazelton prior art with respect to the present application.

Further, the disclosures of the provisional and PCT applications are not assumed to be identical to the disclosure of the Hazelton patent. The Examiner will need to provide Applicants with a copy of the PCT application, and also a copy of each of the provisional applications. In addition, as to the particular teachings for which Hazelton is cited, the Examiner will need to demonstrate that the PCT application and at least one provisional application each disclose those teachings in a manner that meets the disclosure requirements of the first paragraph of 35 U.S.C. §112. For example, the Examiner will need to identify where the teachings appear in the PCT application, and also where the teachings appear in at least one of the provisional applications. If neither provisional application discloses the particular teachings for which Hazelton is being cited, or if the PCT application does not disclose those teachings, then Hazelton is not prior art with respect to the present application in regard to those teachings.

As noted above, Hazelton is not automatically entitled to the benefit of the filing date of either provisional application. Since the Examiner has not yet carried the burden of showing that Hazelton is in fact prior art with respect to the present application in regard to the specific teachings for which Hazelton is being cited, Hazelton is not presently a proper prior art reference for purposes of the present application.

## NONANALOGOUS ART CANNOT BE USED TO ESTABLISH OBVIOUSNESS

Only analogous prior art can be considered for the purpose of trying to establish a prima facie case of obviousness under 35 U.S.C. §103. In this regard, MPEP §2141.01(a) specifies that, for a reference to be "analogous" prior art that can be considered under §103, it must be either (1) in the field of Applicants' endeavor or (2) reasonably pertinent to the particular problem with which the inventor was concerned. The claims of the present application are all directed to immersion lithography technology. The primary reference (Hazelton) also relates to the field of immersion lithography technology. On the other hand, the secondary reference (Van Slyke) has absolutely nothing to do with immersion lithography, and in fact is from a radically different field. The Van Slyke patent was obtained by an oil company (Union Oil Company), and relates to techniques for removing oil (petroleum products) from materials such as fabrics or drill cuttings. Moreover, as discussed in the background section of the present application, for example in paragraph [0009], the problems affecting immersion lithography (and with which the present inventors were concerned) are primarily (1) resist defects, (2) micro-bubbles, and (3) miscellaneous particles. None of these appear to be fundamentally oily in nature.

Thus, Van Slyke is not even remotely related to Applicants' field of endeavor involving immersion lithography. Moreover, the problem solved by Van Slyke appears to be different from the problem with which the present inventors were concerned. Accordingly, it is respectfully submitted that Van Slyke is not what the PTO considers to be "analogous" prior art, and therefore cannot properly be used in an attempt to establish a prima facie case of obviousness under §103. Consequently, the Examiner's burden of factually supporting a prima facie case of obviousness has clearly not been met. For this reason alone, it is respectfully submitted that the pending §103 rejection must be withdrawn, and notice to that effect is respectfully requested.

## NO VALID REASON IS GIVEN FOR MODIFYING HAZELTON IN VIEW OF VAN SLYKE

The PTO recently issued a memo to examiners, a courtesy copy of which is attached. The memo concluded by emphasizing that:

. . . in formulating a rejection under 35 U.S.C. §103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.

On page 4 of the Office Action, the Examiner asserts that the reason a person of ordinary skill would have been prompted to modify Hazelton in view of Van Slyke would be to "enhance the affinity of water". However, Hazelton already has this characteristic. For example, Hazelton et al. explain in paragraph [0010] that their disclosed invention :

. . . may use a cleaning liquid having affinity to the immersion liquid to be contacted with the optical element. If the immersion liquid is water, ethanol may serve as the cleaning fluid.

Consequently, the asserted reason for the proposed modification to Hazelton has no merit, because Hazelton already teaches a cleaning technique that provides affinity to water. A skilled person would therefore not modify Hazelton in order to achieve affinity to water.

It should be clear that the idea to modify Hazelton in view of Van Slyke is not coming from what was known before the present invention, but instead is necessarily coming from hindsight of Applicant's disclosure. In particular, using Applicant's disclosure as a blueprint, the Examiner has selectively extracted isolated features from both Hazelton and Van Slyke, and has then combined these isolated features with a 20/20 hindsight view of the desired result. But the proper inquiry is whether, if Applicant's disclosure is completely ignored, there is any reason that would prompt a person of ordinary skill to modify Hazelton to provide for the removal of oily substances, even though immersion lithography systems of the type disclosed in Hazelton do not appear to have a problem with oily substances, but instead have problems of a different type. The Examiner has not identified any valid reason that would prompt such a modification.

With reference to the enclosed PTO memo, if a §103 rejection does not identify any valid reason that would prompt the proposed modification, then the rejection fails to meet one of the minimum requirements needed to properly establish a prima facie case of obviousness. In the present situation, for each of the various different reasons discussed above, Applicants respectfully submit there is no valid reason that would prompt a person of ordinary skill in the art to make the proposed modification to Hazelton in view of Van Slyke. Accordingly, the proposed modification of Hazelton in view of Van Slyke would not be obvious under §103.

In view of each of the various different reasons discussed above, it is respectfully submitted that Claims 1-27 of the present application are not rendered obvious under §103 by Hazelton and Van Slyke. These claims are thus believed to be allowable, and notice to that effect is respectfully requested.

#### Conclusion

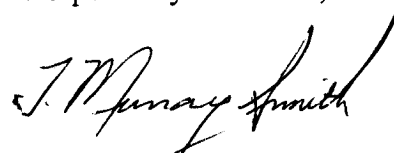
Based on the foregoing, it is respectfully submitted that all of the pending claims are fully allowable, and favorable reconsideration of this application is therefore respectfully requested. If the Examiner believes that examination of the present application may be advanced in any way by a telephone conference, the Examiner is invited to telephone the undersigned attorney at 972-739-8647.

Appl. No. 10/802,087  
Reply to Office Action of June 26, 2007

Attorney Docket No. 2003-1435 / 24061.911  
Customer No. 42717

Although Applicants believe that no additional fees are due, the Commissioner is hereby authorized to charge any fees required by this paper, or to credit any overpayment, to Deposit Account No. 08-1394 of Haynes and Boone, LLP.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "T. Murray Smith", with a stylized flourish at the end.

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Date: September 5, 2007

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Enclosures: Copy of PTO Memo dated May 3, 2007 (2 pages)

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UNITED STATES PATENT AND TRADEMARK OFFICE

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MEMORANDUM

DATE: May 3, 2007

TO: Technology Center Directors

FROM: *Margaret A. Focarino*  
Margaret A. Focarino  
Deputy Commissioner  
for Patent Operations

SUBJECT: Supreme Court decision on *KSR Int'l. Co., v. Teleflex, Inc.*

The Supreme Court has issued its opinion in *KSR*, regarding the issue of obviousness under 35 U.S.C. § 103(a) when the claim recites a combination of elements of the prior art. *KSR Int'l Co. v. Teleflex, Inc.*, No 04-1350 (U.S. Apr. 30, 2007). A copy of the decision is available at <http://www.supremecourtus.gov/opinions/06pdf/04-1350.pdf>. The Office is studying the opinion and will issue guidance to the patent examining corps in view of the *KSR* decision in the near future. Until the guidance is issued, the following points should be noted:

- (1) The Court reaffirmed the *Graham* factors in the determination of obviousness under 35 U.S.C. § 103(a). The four factual inquiries under *Graham* are:
- (a) determining the scope and contents of the prior art;
  - (b) ascertaining the differences between the prior art and the claims in issue;
  - (c) resolving the level of ordinary skill in the pertinent art; and
  - (d) evaluating evidence of secondary consideration.

*Graham v. John Deere*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

- (2) The Court did not totally reject the use of "teaching, suggestion, or motivation" as a factor in the obviousness analysis. Rather, the Court recognized that a showing of "teaching, suggestion, or motivation" to combine the prior art to meet the claimed subject matter could provide a helpful insight in determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a).

- (3) The Court rejected a rigid application of the "teaching, suggestion, or motivation" (TSM) test, which required a showing of some teaching, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the prior art elements in the manner claimed in the application or patent before holding the claimed subject matter to be obvious.

(4) The Court noted that the analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and that it was “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed. The Court specifically stated:

Often, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an **apparent reason** to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis **should be made explicit**.

*KSR*, slip op. at 14 (emphasis added).

Therefore, in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.